SANTA CRUZ BIOTECHNOLOGY, INC.

DDX52 (T-16): sc-132265



BACKGROUND

DEAD box proteins, characterized by the conserved motif Asp-Glu-Ala-Asp, are putative RNA helicases implicated in several cellular processes involving modifications of RNA secondary structure such as translation initiation, nuclear and mitochondrial splicing, and ribosome and spliceosome assembly. Based on their distribution patterns, some members of this family may be involved in embryogenesis, spermatogenesis, and cellular growth and division. DEAD box protein 52 (DDX52), also known as ATP-dependent RNA helicase ROK1-like or HUSSY-19, is a 599 amino acid protein belonging to the DEAD box helicase family. Localized to the nucleus, DDX52 is phosphorylated by ATM or ATR upon DNA damage. DDX52 contains one helicase ATP-binding domain and one helicase C-terminal domain.

REFERENCES

- 1. Silverman, E., et al. 2003. DExD/H-box proteins and their partners: helping RNA helicases unwind. Gene 312: 1-16.
- Yang, Q. and Jankowsky, E. 2005. ATP- and ADP-dependent modulation of RNA unwinding and strand annealing activities by the DEAD-box protein DED1. Biochemistry 44: 13591-13601.
- 3. Cordin, O., et al. 2006. The DEAD-box protein family of RNA helicases. Gene 367: 17-37.
- 4. Tuteja, R. and Pradhan, A. 2006. Unraveling the "DEAD-box" helicases of *Plasmodium falciparum*. Gene 376: 1-12.
- Yang, Q. and Jankowsky, E. 2006. The DEAD-box protein Ded1 unwinds RNA duplexes by a mode distinct from translocating helicases. Nat. Struct. Mol. Biol. 13: 981-986.
- Taylor, K.H., et al. 2007. Large-scale CpG methylation analysis identifies novel candidate genes and reveals methylation hotspots in acute lymphoblastic leukemia. Cancer Res. 67: 2617-2625.
- 7. Yang, Q., et al. 2007. DEAD-box proteins unwind duplexes by local strand separation. Mol. Cell 28: 253-263.
- 8. Chen, Y., et al. 2008. DEAD-box proteins can completely separate an RNA duplex using a single ATP. Proc. Natl. Acad. Sci. USA 105: 20203-20208.
- Liu, F., et al. 2008. ATP hydrolysis is required for DEAD-box protein recycling but not for duplex unwinding. Proc. Natl. Acad. Sci. USA 105: 20209-20214.

CHROMOSOMAL LOCATION

Genetic locus: DDX52 (human) mapping to 17q12; Ddx52 (mouse) mapping to 11 C.

SOURCE

DDX52 (T-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of DDX52 of human origin.

STORAGE

Store at 4° C, **D0 NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-132265 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DDX52 (T-16) is recommended for detection of DDX52 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other DDX family members.

DDX52 (T-16) is also recommended for detection of DDX52 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for DDX52 siRNA (h): sc-94213, DDX52 siRNA (m): sc-142944, DDX52 shRNA Plasmid (h): sc-94213-SH, DDX52 shRNA Plasmid (m): sc-142944-SH, DDX52 shRNA (h) Lentiviral Particles: sc-94213-V and DDX52 shRNA (m) Lentiviral Particles: sc-142944-V.

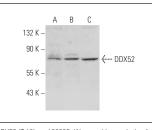
Molecular Weight of DDX52: 67 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

DATA



DDX52 (T-16): sc-132265. Western blot analysis of DDX52 expression in NIH/3T3 (A), HeLa (B) and Hep G2 (C) whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.